

## REMARKS

This communication is a fully and timely response to the non-final office action dated August 2, 2007. Claims 1-9 are pending. By this communication, claims 1 and 8 have been amended. Reconsideration and allowance of all pending claims are respectfully requested.

In numbered paragraph 3 on page 2 of the Office Action, claims 1-9 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Pozgay et al* (U.S. Patent No. 7,079,815) in view of *Saxler* (U.S. Patent No. 7,030,428). Applicants respectfully traverse this rejection.

The combination of the *Pozgay et al* and *Saxler* patents fails to establish a *prima facie* case of obviousness.

Applicant's exemplary Figure 1 illustrates a radar system that includes a first switch 105, GaN amplifiers 110a, 110b, and 110c, and a second switch 115. A switch controller 140 controls the first and second switches 105 and 115 to connect an antenna to transmit and receive paths. Amplifiers 110a, 110b, and 110c are included in a circuit that is configured such that a drain and a gate of the amplifiers have a common source. The amplifier circuit is configured such that lower noise figures are realized over all frequencies.

Applicant's claims 1 and 8 broadly encompass the aforementioned features by reciting, in part, an amplifier that includes a plurality of AlGaN amplifiers that are connected such that a drain and a gate of the plurality of amplifiers have a common source.

On page 3 of the Office Action, the Examiner acknowledges that the *Pozgay* patent fails to disclose or suggest an amplifier that is formed of an AlGaN-based material and relies on the *Saxler* patent in an effort to remedy this deficiency.

The *Pozgay* patent discloses a microwave transceiver having transmit/receive switches. Each switch includes a common port for connecting to an antenna element, a transmit port, a receive port, and a matched port. The transceiver also includes a gain/phase control unit 22 that provides a control signal to the switches to enable the transmission or reception of RF energy. The *Pozgay* patent also teaches the use of an amplifier 28 that is fabricated with several high electron mobility transistor GaAs based semiconductor processes.

The *Saxler* patent discloses a high electron mobility transistor that includes a Group III-nitride bottom confinement layer 16 and a GaN-based channel layer 18,

Given the respective teachings, however, Applicant respectfully submits that a combination of the aforementioned documents as alleged by the Examiner fails to render Applicant's claims obvious. The *Pozgay* patent discloses the use of a balanced amplifier comprised of several GaAs-based semiconductor devices. However, there is no evidence that one of ordinary skill would have had reason to substitute the semiconductor devices disclosed in the *Saxler* patent and devise a structural configuration as recited in Applicant's claims. In other words, when viewed individually or collectively neither discloses or suggests Applicant's claimed amplifier that includes a plurality of AlGaN amplifiers that are connected such that a drain and a gate of the plurality of amplifiers have a common source

In sum, the *Pozgay* and *Saxler* patents when applied individually or in the manner alleged by the Examiner, fail to disclose or suggest every element recited in

Applicant's claims. For these reasons, independent claims 1 and 8 and their corresponding dependent claims are allowable.

The Office has the initial burden of establishing a **factual basis** to support the legal conclusion of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103(a) based upon a combination of prior art elements, in KSR Int'l v. Teleflex Inc., 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), the Supreme Court stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some **articulated reasoning with some rational underpinning** to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (emphasis added). Based on the foregoing discussion, withdrawal of this rejection is respectfully requested.

Based on at least the foregoing amendments and remarks, Applicant submits that claims 1-9 are allowable and this application is in condition for allowance. Accordingly, Applicant requests favorable examination and consideration of the instant application. In the event any issues remain, the Examiner is invited to contact Applicant's representative identified below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: December 26, 2007

By:

  
\_\_\_\_\_  
Shawn B. Cage  
Registration No. 51,522

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620